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#### ABSTRACT

A method is provided for preparing, with high reproducibility, a carbon-doped group III-V compound semiconductor crystal having favorable electrical characteristics and having impurities removed therefrom, and in which the amount of doped carbon can be adjusted easily during crystal growth. This method includes the steps of: filling a crucible with compound raw material, solid carbon, and boron oxide; sealing the filled crucible gas impermeable material; heating and melting the compound raw material under the sealed state in the airtight vessel; and solidifying the melted compound raw material to grow a carbon-doped compound semiconductor crystal.